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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David A. Wright et al.

Title: PLANT RETROELEMENTS AND METHODS RELATED THERETO

Docket No.: 900.176US1
Filed: June 2, 2000
Examiner: Konstantina Katcheves
Serial No.: 09/586,106
Due Date: November 2, 2001
Group Art Unit: 1636

Commissioner for Patents
Washington, D.C. 20231

We are transmitting herewith the following attached items (as indicated with an "X"):

X A return postcard.
X Response to Restriction Requirement (4 Pages).

Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

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S/N 09/586,106

PATENT

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RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents
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In response to the Restriction Requirement mailed October 2, 2001, Applicants provisionally elect, with traverse, the subject matter of Group I (claims 1-4, 9-12, 15-18, 21-23 and 25). Applicants also provisionally elect, with traverse, a nucleic acid having SEQ ID NO:62 that encodes amino acid sequence SEQ ID NO:63.

However, Applicants respectfully traverse this Requirement for Restriction and request reconsideration thereof.

The Examiner has made this Requirement for Restriction under 35 U.S.C. § 121 and has required election of one of Groups I or II, listed below.

I Claims 1-4,9-12; 15-18 and 21-23 and 25, drawn to nucleic acid and vector selected from SEQ ID NOs: 42-164 and a transgenic seed and plant, classified in class 536, subclass 23.1; class 435, subclass 320.1; and class 435, subclass 419.

II Claims 5-8,13-14,19 and 20 drawn to nucleic acid and vector selected from SEQ ID NOs: 42-164 and further comprising SEQ ID NO:5 and a transgenic seed and plant, classified in class 536, subclass 23.1; class 435, subclass 320.1; and class 435, subclass 419.

According to the Examiner, the inventions of Groups I and II are distinct for the following reasons.

> Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are unrelated because they are drawn to different products and methods. Group I is drawn to a transformation vector, the transformed plant cells and the transgenic plant comprising nucleic acids selected from SEQ ID NOs:42-164. The method of Group II further comprises SEQ ID NO:5. As evidenced by the fact that the method of Group II requires an additional sequence, the invention is unique from that of Group I because the sequence of SEQ ID NO:5 is a unique chemical entity with unique

> characteristics requiring a different field of search for Group II than the method of Group I.
>
> This application contains claims that are directed to patentably distinct nucleotide and amino acid sequences. The claims of the instant application recite SEQ ID NOs:42-164. The nucleotide sequences and amino acid sequences of the instant claims are subject to a restriction requirement. Nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. 121. Applicant's claimed sequences comprise open reading frames. Absent evidence to the contrary, each such nucleotide sequence or amino acid sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq. Accordingly, in most cases, only one (1) independent and distinct sequence will be examined in a single application without restriction.

Office Action at 2-3 (Oct. 2, 2001).

Applicants submit that the claims of Groups I and II constitute one invention within the context of 35 U.S.C. § 121 and that SEQ ID NO: 42-164 are not so independent and distinct as to require separate examination.

MPEP § 806 summarizes the general principles relating to distinctiveness and independence as follows.

> (A) Where inventions are independent (i.e., no disclosed relation therebetween), restriction to one thereof is ordinarily proper, MPEP § 806.04 -§ 806.04(i), though a reasonable number of species may be claimed when there is an allowed (novel and unobvious) claim generic thereto. 37 CFR 1.141, MPEP § 809.02 - § 809.02(e).
>
> (B) Where inventions are related as disclosed but are distinct as claimed, restriction may be proper.
>
> (C) Where inventions are related as disclosed but are not distinct as claimed, restriction is never proper.

Applicants submit that the subject matter of Groups I and II, and of SEQ ID NOs:42-164, are not independent because, as characterized by the Examiner, the subject matter of these groups both relate to drawn to a nucleic acid and vector selected from SEQ ID NOs: 42-164 and a transgenic seed and plant. As defined by the claims and the specification (see, e.g., Page 20,

Line 25 to Page 24, Line 19), each of SEQ ID NOs:42-164 encodes at least a portion of a plant retroelement reverse transcriptase. Groups I and II are therefore both drawn to nucleic acids and vectors encoding reverse transcriptases. Accordingly, a disclosed relationship clearly exists between the subject matter of Groups I and II, and particularly between SEQ ID NOs:42-164.

While Group II also encompasses nucleic acids having SEQ ID NO:5, Applicants submit that the subject matter of SEQ ID NO:5, encoding a plant envelope protein, and the subject matter of SEQ ID NOs:42-164, encoding reverse transcriptases, is not necessarily independent. As noted by the Examiner, inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. Office Action at 2 (Oct. 2, 2001); *see also* MPEP § 806.04(A). However, in the context of the invention, the envelope protein encoded by SEQ ID NO:5 can readily be used together with the reverse transcriptases of SEQ ID NOs:42-164 in a vector or transformation system. In such a vector or transformation system, their function, effect and mode of operation would be inter-related and coordinated to achieve a single, common result. Accordingly, no requirement for restriction can be sustained under MPEP § 806.04(A).

Similarly, no requirement for restriction can be sustained under MPEP § 806.04(B) because the claimed subject matter of Groups I and II is not related as a process and apparatus.

The Examiner has also alleged that additional searches would be required for the subject matter of Groups I and II.

> Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and because the inventions have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Office Action at 3 (Oct. 2, 2001). However, Groups I and II have been classified in an identical manner. Both of Groups I and II are identically classified in class 536, subclass 23.1; class 435, subclass 320.1; and class 435, subclass 419. Hence, only a single search of these classes would be required for examination of both Groups I and II.

Applicants further traverse the requirement for electing a single nucleic acid sequence. As provided by the MPEP, species may be related inventions and need not be subject to restriction. *See* MPEP § 806.04(b). In particular, where species are claimed under a common genus and are

related, the question of restriction is determined by the practice applicable to election of species and the practice applicable to other types of restrictions. *See id.* Here, each of SEQ ID Nos: 42-164 are claimed in one or more generic claims and those generic claims explicitly define how those sequences are related (all reverse transcriptases). *See,* claim 1, 9 and 15. Accordingly, SEQ ID NOs:42-164 are related and Applicants respectfully request that the Examiner reconsider whether restriction is proper in this case.

Applicants also respectfully remind the Examiner that they are entitled to examination of a reasonable number of species, and that election of species is for the convenience of the Examiner in initiating the search.

Therefore, withdrawal or modification of this Requirement is appropriate and is respectfully requested.

Please charge any fees due or credit any overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 2 day of November, 2001.

Jane E. Brockschink
Name

Jane E. Brockschink
Signature